

AN ORDINANCE OF THE CITY OF FRISCO, TEXAS, PARTIALLY REPEALING ORDINANCE NO. 08-01-12; REPEALING ORDINANCE NOS. 01-05-39; 06-10-111 AND 07-04-17; AMENDING DIVISION 4 (RESIDENTIAL CODE), ARTICLE IV (TECHNICAL CODES), CHAPTER 18 (BUILDINGS AND BUILDING REGULATIONS), PART II OF THE FRISCO CODE OF ORDINANCES, ADOPTING THE 2012 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE, INCLUDING APPENDICES G, J AND K, SAVE AND EXCEPT THE DELETIONS AND ADDITIONS SET FORTH HEREIN; REGULATING THE CONSTRUCTION, ALTERATION, MOVEMENT, ENLARGEMENT, REPLACEMENT, REPAIR, EQUIPMENT, USE AND OCCUPANCY, LOCATION, REMOVAL, AND DEMOLITION OF DETACHED ONE AND TWO-FAMILY DWELLINGS AND MULTIPLE SINGLE-FAMILY DWELLINGS (TOWNHOUSES) NOT MORE THAN THREE STORIES IN HEIGHT WITH A SEPARATE MEANS OF EGRESS AND RELATED ACCESSORY STRUCTURES IN THE CITY OF FRISCO, TEXAS; PROVIDING FOR A PENALTY FOR THE VIOLATION OF THIS ORDINANCE; PROVIDING FOR REPEALING, SAVINGS AND SEVERABILITY CLAUSES; PROVIDING FOR AN EFFECTIVE DATE OF THIS ORDINANCE; AND PROVIDING FOR THE PUBLICATION OF THE CAPTION HEREOF.

WHEREAS, the City Council of the City of Frisco, Texas ("City Council") has investigated and determined that it would be advantageous, beneficial and in the best interest of the citizens of the City of Frisco, Texas ("Frisco") to amend Division 4 (Residential Code), Article IV (Technical Codes), Chapter 18 (Buildings and Building Regulations), Part II of the Frisco Code of Ordinances by adopting the 2012 Edition of the International Residential Code, including Appendices G, J and K, save and except the deletions and additions set forth below; and

WHEREAS, the City Council has investigated and determined that in order to most effectively make the deletions and additions necessary to Division 4 (Residential Code), Article IV (Technical Codes), Chapter 18 (Buildings and Building Regulations), Part II of the Frisco Code of Ordinances, it is in the best interest of the citizens of Frisco to partially repeal Ordinance No. 08-01-12 and repeal, in their entirety, Ordinance Nos. 01-05-39, 06-10-111 and 07-04-17, replacing, except as otherwise provided herein, the same with this Ordinance, adopting the 2012 Edition of the International Residential Code, including Appendices G, J, and K, save and except the deletions and additions set forth below.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FRISCO, TEXAS:

SECTION 1: Findings Incorporated. The findings set forth above are incorporated into the body of this Ordinance as if fully set forth herein.

SECTION 2: Partial Repeal of Ordinance No. 08-01-12: Compliance with §1301.551, TEX. OCC. CODE. Ordinance No. 08-01-12 is partially repealed. The portion of Ordinance No. 08-01-12 which shall remain in full force and effect, as restated, reaffirmed and ratified herein is set forth in Ordinance No. 08-01-12, Exhibit "A", which provides, in pertinent part:

"Chapter 3. Building Planning of the 2006 International Residential Code is amended as follows:

...

Section 325 Automatic Fire Protection of the 2006 International Residential Code is added as follows:

SECTION R325 AUTOMATIC FIRE PROTECTION

Section R325.1. Automatic fire protection required: Automatic fire protection systems in accordance with NFPA 13D or NFPA 13R shall be provided in all one and two-family dwellings with a gross floor area 6000 square feet (1830 m²) or greater. For the purposes of this section, gross floor area means conditioned space and attached garage areas. Unenclosed covered areas, such as porches and balconies, are not included. Automatic fire protection systems shall be provided in all buildings containing three (3) or more dwelling units. In the event that an addition or alteration increases the gross floor area from less than 6000 square feet to equal to or greater than 6000 square feet the entire dwelling shall be retrofitted with an automatic fire protection system in accordance with NFPA 13D or NFPA 13R.

Where requirements in this section conflict with requirements found in the International Fire Code, adopted by Frisco, the most stringent requirements shall apply."

The effective date of the partial repeal discussed in this Section shall not occur until the effective date of this Ordinance at which time Ordinance No. 08-01-12 shall be partially repealed. Such partial repeal shall not abate any pending prosecution and/or lawsuit or prevent any prosecution and/or lawsuit from being commenced for any violation of Ordinance No. 08-01-12 occurring before the effective date of this Ordinance.

The City Council hereby finds that partially repealing Ordinance No. 08-01-12, save and except Section 325 as restated above and contained in Exhibit "A" of Ordinance No. 08-01-12, fully complies with §1301.551, TEX. OCC. CODE, relating to, among other things, a municipality's authority to regulate, by ordinance, or otherwise, the installation of a multipurpose residential fire protection sprinkler system or any other fire sprinkler protection system in a new or existing one- or two-family dwelling.

SECTION 3: Repeal of Ordinance Nos. 01-05-39, 06-10-111 and 07-04-17. Ordinance Nos. 01-05-39, 06-10-111 and 07-04-17 are hereby repealed, in their entirety, and replaced by this Ordinance. The effective date of the repeal discussed in this Section shall not occur until the effective date of this Ordinance at which time Ordinance Nos.

01-05-39, 06-10-111 and 07-04-17 shall be repealed. Such repeal shall not abate any pending prosecution and/or lawsuit or prevent any prosecution and/or lawsuit from being commenced for any violation of Ordinance No. 01-05-39, 06-10-111 and 07-04-17 occurring before the effective date of this Ordinance.

SECTION 4: Amendment to Division 4 (Residential Code), Article IV (Technical Codes), Chapter 18 (Buildings and Building Regulations), Part II of the Frisco Code of Ordinances. Division 4 (Residential Code), Article IV (Technical Codes), Chapter 18 (Buildings and Building Regulations), Part II of the Frisco Code of Ordinances is hereby amended for the sole purpose of adopting new residential code regulations as set forth in the International Residential Code, copyrighted by the International Code Council, Inc., including Appendices G, J and K, save and except the deletions and additions set forth in Exhibit "A", attached hereto and incorporated herein for all purposes, regulating the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal, and demolition of detached one-family and two-family dwellings and multiple single-family dwellings (townhouses) not more than three (3) stories in height with a separate means of egress and related accessory structures within Frisco ("2012 International Residential Code"). The 2012 International Residential Code is made a part of this Ordinance as if fully set forth herein. Three (3) copies of the 2012 International Residential Code are on file in the office of the City Secretary of Frisco being marked and designated as the 2012 International Residential Code. The deletions and additions set forth in Exhibit "A" are located on Frisco's website under Development Services.

SECTION 5: Savings/Repealing Clause. All provisions of any ordinance in conflict with this Ordinance are hereby repealed to the extent they are in conflict; but such repeal shall not abate any pending prosecution for violation of the repealed ordinance, nor shall the repeal prevent a prosecution from being commenced for any violation if occurring prior to the repeal of the ordinance. Any remaining portion of conflicting ordinances shall remain in full force and effect.

SECTION 6: Penalty Provision. Any person, firm, corporation or business entity violating this Ordinance shall be deemed guilty of a misdemeanor, and upon conviction therefore, shall be fined a sum not exceeding TWO THOUSAND AND NO/100 DOLLARS (\$2,000.00), and each and every day that such violation continues shall be considered a separate offense; provided, however, that such penal provision shall not preclude a suit to enjoin such violation. Frisco retains all legal rights and remedies available to it pursuant to local, state and federal law.

SECTION 7: Severability. If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason, held to be unconstitutional or invalid by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. Frisco hereby declares that it would have passed this Ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses, and phrases be declared unconstitutional.

SECTION 8: Effective Date. This Ordinance shall become effective upon its passage and publication as required by the City Charter and by law.

DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF
FRISCO, TEXAS, on this 1st day of October, 2013.

Maher Maso

Maher Maso, Mayor

ATTESTED AND CORRECTLY
RECORDED:

Jenny Page
City Secretary



APPROVED AS TO FORM:

Rebecca Hendricks Brewer

Abernathy, Roeder, Boyd & Joplin, P.C.
Rebecca Hendricks Brewer, City Attorneys

Date(s) of Publication: October 4th and October 11, 2013, *Frisco Enterprise*

Exhibit "A"
CITY OF FRISCO AMENDMENTS/DELETIONS
2012 INTERNATIONAL RESIDENTIAL CODE¹

The following deletions and additions to the 2012 International Residential Code are hereby approved and adopted (*i.e.* deletions evidenced by ~~strikethrough~~ and additions evidenced by underline)²:

Chapter 1. Scope and Administration of the 2012 International Residential Code is amended as follows:

Section R102 Applicability of the 2012 International Residential Code is amended as follows:

R102.4 Referenced codes and standards. The codes and standards referenced in this code shall be considered as part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections R102.4.1 and R102.4.2. ~~Whenever amendments have been adopted by Frisco, as they exist or may be further amended, to the referenced codes and standards, each reference to said codes and standards shall be considered to reference the amendments and any future amendments thereto.~~

Section R105 Permits of the 2012 International Residential Code is amended as follows:

R105.2 Work exempt from permit. *[Paragraph remains unchanged.]*

Building:

- ~~1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 200 square feet (18.58 m²).~~
- ~~2. Fences not over 7 feet (2134 mm) high.~~
- ~~5. Sidewalks and driveways.~~

Plumbing:

1. Water heater replacement is not exempt from the permit requirements and inspections provided herein.

Section R106 Construction Documents of the 2012 International Residential Code is amended as follows:

¹ Unless otherwise expressly provided herein, all phrases, words and/or terms used herein shall have the same meaning ascribed to the same in the 2012 International Residential Code (regardless of whether such phrases, words and/or terms are italicized herein).

² Other italicized and bold notations are provided throughout for informational purposes only. By way of example only, "*[Paragraph remains unchanged.]*".

R106.1 Submittal documents. Submittal documents consisting of construction documents and other data shall be submitted in two or more sets with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional. Foundation and framing plans shall be submitted with each application. These plans shall be designed by an engineer licensed by the State of Texas and shall bear that engineers seal. The engineer must also meet all requirements for registration with the City. All Residential Dwellings shall be designed by a registered Professional Engineer in the State of Texas and all drawings and documentation must be signed and sealed. Design Engineers must be registered with Frisco and provide proof of Professional Liability Insurance with a minimum coverage of one million dollars.

Section R107 Temporary Structures and Uses of the 2012 International Residential Code is amended as follows:

R107.1 General. The building official is authorized to issue a permit for temporary structures and temporary uses. Such permits shall be limited as to time of service, but shall not be permitted for more than 180 days. The building official is authorized to grant extensions for demonstrated cause. Such permits shall comply with the provisions of Frisco's Zoning Ordinance and the International Building Code regulations for temporary structures, as they exist or may be amended.

Section R108 Fees of the 2012 International Residential Code is amended as follows:

~~R108.2 Schedule of permit fees~~Permit, Inspection and Miscellaneous Consolidated Fee Schedule. On buildings, structures, electrical, gas, mechanical and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority. The following Permit, Inspection and Miscellaneous Consolidated Fee schedule shall apply to the construction, alternation, movement, occupancy, location, removal and demolition of detached one- and two-family dwellings and multiple three stories in height with a separate means of egress and related accessory structures within Frisco:

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK.]

Permit, Inspection and Miscellaneous Consolidated Fee Schedule

Building Permit Fees		
Commercial Building Permit	*%60 of Table Value	Table 1-A
Residential Building Permit		Table 1-A

TABLE 1-A*		
\$1 to \$500.00	\$23.50	
\$500.01 to \$2,000.00	\$23.50 for the first \$500 plus \$3.05 for each additional \$100, or fraction thereof, to and including \$2,000.	
\$2,000.01 to \$25,000.00	\$69.25 for the first \$2,000 plus \$14.00 for each additional \$1,000.00, or fraction thereof, to and including \$25,000.	
\$25,000.01 to \$50,000.00	\$391.25 for the first \$25,000 plus \$10.10 for each additional \$1,000, or fraction thereof, to and including \$50,000.	
\$50,000.01 to \$100,000.00	\$643.75 for the first \$50,000 plus \$7.00 for each additional \$1,000, or fraction thereof, to and including \$100,000.	
\$100,000.01 to \$500,000.00	\$993.75 for the first \$100,000 plus \$5.00 for each additional \$1,000, or fraction thereof, to and including \$500,000.	
\$500,000.01 to \$1,000,000.00	\$3233.75 for the first \$500,000 plus \$4.75 for each additional \$1,000, or fraction thereof, to and including \$1,000,000.	
\$1,000,000.01 and above	\$5,808.75 for the first \$1,000,000 plus \$3.15 for each additional \$1,000 or fraction thereof.	
Inspection outside of normal business hours		\$150.00

* Commercial building permit fees are assessed on the basis of %60 of the calculated value of Table 1-A

Miscellaneous	
Certificate of Occupancy (Change of business name, ownership or use)	\$100.00
Certificate of Occupancy (Non-Conforming Use)	\$25.00
Demolition Permit	\$50.00
Reroof Permit	\$150.00
Detached Accessory Building (<100 sq ft)	\$25.00
Detached Accessory Building (≥100 sq ft, <160 sq ft)	\$50.00
Detached Accessory Building (≥160 sq ft)	Table 1-A
Duplicate Permit Placard and Reports	\$10.00
Commercial Irrigation - Per meter	
Single Meter	\$250.00
Second Meter add +	\$175.00
Three and Greater Meters	\$500.00
Residential Irrigation Permit	\$185.00
Reinspection Fee (Residential)	\$30.00
Reinspection Fee (Commercial)	\$35.00
Spa Permit	\$75.00
Structure Move Permit	\$50.00
Swimming Pool (Above Ground)	\$100.00
Swimming Pool (Below Ground)	\$200.00
Swimming Pool (Below Ground w/ spa)	\$275.00
Temporary Building Permit	\$50.00

Electrical Permit Fees	
For issuance of each permit	\$30.00
For issuance of each supplemental permit	\$10.00
All inclusive Residential permit by permit Square Footage	\$0.03 / per sqft
All inclusive Commercial permit by permit Square Footage	\$0.04 / per sqft
Electrical Meter Release	\$45.00
Each Residential Appliance	\$4.75
Each Commercial Appliance	\$4.75
Each Temporary Services	\$23.50
Each Misc Apparatus	\$18.20
Motors (Horse power) ea.	
Up to 1	\$4.75
1, not over 10	\$12.30
10, not over 50	\$24.60
50, not over 100	\$49.50
over 100	\$74.50
Service Installation Replacement (Amps) ea.	
Up to 200	\$65.00
200, up to 1000	\$85.00
Over 1000 amps	\$150.00

Mechanical Permit Fees	
For issuance of each permit	\$30.00
For New finish-out/alterations	\$0.05/gsf
For issuance of each supplemental permit	\$10.00
Furnaces	
Installation or relocation of each forced air unit up to and including 100,000 Btu/h	\$13.25
Installation or relocation of each forced air unit over 100,000 Btu/h	\$16.25
Installation or relocation of each floor furnace	\$13.25
Installation or relocation of each suspended heater, recessed wall heater or floor-n	\$13.25
Appliance Vents	
Installation, relocation or replacement of each vent	\$7.00
Repairs or Additions	
Repair of, Alteration of or Addition of each heating or cooling appliance	\$12.25
Boiler, Compressor and Absorption Systems	
Installation or relocation of each boiler or compressor to including 3 horsepower or up to and including 100,000 Btu/h	\$13.25
Installation or relocation of each boiler or compressor to including 3 - 15 horsepower or over 100,000 - 500,000 Btu/h	\$24.25
Installation or relocation of each boiler or compressor to including 15 - 30 horsepower or over 500,000 - 1,000,000 Btu/h	\$33.25
Installation or relocation of each boiler or compressor to including 30 - 50 horsepower or over 1,000,000 - 1,750,000 Btu/h	\$49.50
Installation or relocation of each boiler or compressor to over 50 horsepower or over 1,750,000 Btu/h	\$82.75
Air Handlers	
Installation or relocation of each air-handling to and including 10,000 cubic feet	\$9.50
Note: This does not apply to an air handling unit which is a part of a factory assembled appliance	
Installation or relocation of each air-handling over 10,000 cubic feet	\$16.50
Evaporative Coolers	
Installation or relocation of each evaporative cooler other than portable type	\$9.50
Ventilation and Exhaust	
Installation or relocation of each ventilation fan connected to a single duct or h	\$6.50
Miscellaneous - Installation or relocation of each fuel gas piping systems	
One to Four outlets	\$5.00
Each additional outlet exceeding four	\$1.00

Plumbing Permit Fees	
For issuance of each permit	\$30.00
For New finish-out/alterations	\$0.09/gsf
For issuance of each supplemental permit	\$10.00
For each plumbing fixture on one trap or a set of fixtures on one trap (including water, drainage piping and backflow protection therefore)	\$7.00
For each building sewer and each trailer park sewer	\$15.00
Rainwater systems - per drain (inside building)	\$7.00
For each cesspool (where permitted)	\$25.00
For each private sewage disposal system \$	\$40.00
For each water heater and / or vent \$	\$7.00
For each gas-piping of one to five outlets	\$5.00
For each additional gas piping system outlet, per outlet	\$1.00
For each industrial waste pretreatment interceptor including its trap and vent, except kitchen type grease interceptors functioning as fixture traps	\$7.00
For each installation, alteration or repair of water piping and / or water treating eq	\$7.00
For each repair or alteration of drainage or vent piping, each fixture	\$7.00
For each lawn sprinkler system on any one meter including backflow protection de	\$35.00
For atmospheric-type vacuum breakers	
1 to 5	\$5.00
over 5, each	\$1.00
For each backflow protective device other than atmospheric type vacuum breakers:	
2 inch (51mm) diameter and smaller	\$7.00
over 2 inch (51mm)	\$15.00
For each graywater system	\$40.00
For initial installation and testing for a reclaimed water system	\$30.00
For each annual cross-connection testing of a reclaimed water system (excluding in	\$30.00
For each medical gas piping system serving one to five inlet(s) / outlet(s) for a spec	\$50.00
For each additional medical gas inlet(s) / outlet(s)	\$5.00

R108.2.2 Plan review fees. Plan review fees shall be required when, in the judgment of the building official, submitted documents require special review by a third party plan review service. The plan review fee shall be sixty-five percent (65%) of the building permit fee. The plan review fees specified in this section are separate and in addition to the required building permit fees.

R108.5 Refunds. The building official is authorized to establish a refund policy.

The building official may authorize refunding of any fee paid hereunder, which was erroneously paid or collected.

The building official may authorize refunding of not more than 80 percent of the permit fee paid when no work has been done under a permit issued in accordance with this code.

The building official may authorize refunding of not more than 80 percent of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan reviewing is done.

The building official shall not authorize refunding of any fee paid except on written application filed by the original permittee not later than 180 days after the date of fee payment.

Section R109 Inspections of the 2012 International Residential Code is amended as follows:

R109.1.4 Frame and masonry inspection. *[Paragraph remains unchanged.]*

Design engineer must perform a structural framing inspection and provide the building official with signed and sealed document stating that the house framing has been inspected and approved. This inspection must take place prior to requesting a framing inspection from the building official. The engineer shall physically verify all structural corrections.

The engineer shall provide to the building official a letter of final acceptance stating that the framing has been constructed in compliance with the design prior to the issuance of a Certificate of Occupancy, as defined in Frisco's Zoning Ordinance, as it exists or may be amended.

Section R112 Board of Appeals of the 2012 International Residential Code is amended as follows:

R112.2.1 Determination of substantial improvement in flood hazard areas. *[Entire subsection deleted.]*

R112.2.2 Criteria for issuance of a variance for flood hazard areas. *[Entire subsection deleted.]*

Section R115 Site Maintenance of the 2012 International Residential Code is added as follows:

R115 Site maintenance. Provisions for sanitation and construction debris shall be provided for all construction sites.

R115.1 Facilities required. Each permitted construction project in Frisco shall be provided with at least one (1) temporary portable toilet facility for use by employees and subcontractors. Builders or contractors with multiple permits in a subdivision shall provide one portable toilet for a maximum five permits. Portable toilet facilities shall be located in the rear portion of lots where alley access is available. Portable toilet facilities shall not be placed in street or alley right-of- ways. The builder or permit holder shall be responsible for ensuring that toilet facilities are maintained in a sanitary condition. The building official may, at his discretion, require that additional toilet facilities be provided if these requirements prove to be insufficient.

R115.2 Trash receptacles. Each permitted construction project in Frisco shall be provided with receptacles of a sufficient size and number to contain jobsite trash and debris, including, but not limited to, food wrappers and containers from workers lunches. Trash receptacles shall be maintained on site at all times during construction activities. The builder or permit holder shall be responsible for ensuring that trash receptacles are utilized by all employees and subcontractors, and that all trash is removed at intervals adequate to maintain a clean job site. In addition to the required receptacles, each lot shall be provided with screen fencing to prevent windblown trash and debris from adjacent lots. Other methods of construction debris containment may be approved if compliance can be demonstrated and maintained.

Chapter 2. Definitions of the 2012 International Residential Code is amended as follows:

Section R202 Definitions of the 2012 International Residential Code is amended as follows:

~~**ACCESSORY STRUCTURE.** A structure not greater than 3,000 square feet (279 m²) in floor area, and not over two stories in height, the use of which is customarily accessory to and incidental to that of the dwelling(s) and which is located on the same lot.~~

ACCESSORY STRUCTURE or ACCESSORY BUILDING. Any structure, either attached or detached from the main dwelling, the use of which is incidental to that of the main structure and located on the same lot. Accessory structures include, but are not limited to patio covers, arbors, gazebos, cabanas, outdoor kitchens and/or recreational fire enclosures, trellis, and structures/sheds or the like. A permit is required for all accessory structures.

TOWNHOUSE. A single-family dwelling unit designed for occupancy by one household and constructed in a group of ~~three or more~~ three (3) to eight (8) attached dwelling units separated by property lines in which each unit extends from foundation to roof and with a yard or public way on at least two sides.

Chapter 3. Building Planning of the 2012 International Residential Code is amended as follows:

Section 301 Design Criteria of the 2012 International Residential Code is amended as follows:

R301.2 Climatic and geographic design criteria. *[Paragraph remains unchanged.]*

TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND DESIGN		SEISMIC DESIGN CATEGORY ^f
	Speed ^d (mph)	Topographic effects ^k	
5 lb/ft ²	90 (3-sec- gust)/75 fastest mile	No	A

SUBJECT TO DAMAGE FROM		
Weathering ^a	Frost line depth ^b	Termite ^c
moderate	6"	very heavy

WINTER DESIGN TEMP ^e	ICE BARRIER UNDERLAYMENT REQUIRED ^h	FLOOD HAZARDS ^g	AIR FREEZING INDEX ⁱ	MEAN ANNUAL TEMP ^j
22°F	No	local code	69°F	64.9°F

R302.2 Townhouses. Each townhouse shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302.1 for exterior walls. Each townhouse roof shall be covered with a minimum class C roof covering. The roof decking or sheathing shall be of noncombustible materials or approved fire-retardant-treated wood for a distance of 4 feet (1219 mm) on each side of the wall or walls, or one layer of 5/8-inch (15.9 mm) Type X gypsum board installed directly beneath the roof decking or sheathing and supported by a minimum of nominal 2-inch (51 mm) ledgers attached to the sides of the roof framing members, for a minimum distance of 4 feet (1219 mm) on each side of the wall or walls. Openings or penetrations in the roof are not permitted within 4 feet (1219 mm) of the common walls.

Exception: *[Entire exception deleted.]*

R302.2.4 Structural independence. Each individual townhouse shall be structurally independent.

Exceptions:

~~5. Townhouses separated by a common 1-hour fire-resistance-rated wall as provided in Section R302.2.~~

R302.3 Two-family dwellings. Dwelling units in two-family dwellings shall be separated from each other by wall and/or floor assemblies having not less than a 1-hour fire-resistance rating when tested in accordance with ASTM E 119 or UL263. Fire-resistance rated floor-ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend to the underside of the roof sheathing. Two family dwelling units that are also divided by a property line through the structure shall be separated as required in Section R302.2 for townhouses.

Exceptions: *[Exceptions remain unchanged.]*

R302.5.1.1 Access Penetrations. Access penetrations in the separation required by Section R302.5 shall have a tight fitting, non-combustible and latching cover.

R302.6 Dwelling/garage fire separation. *[Paragraph remains unchanged.]*

**TABLE R302.6
DWELLING/GARAGE SEPARATION**

SEPARATION	MATERIAL
From the residence and attics	Not less than ½-inch gypsum board or equivalent applied to the garage side at attics and not less than 5/8-inch Type X gypsum board or equivalent applied to the garage side separating the garage from habitable space.
From all habitable rooms above the garage	Not less than 5/8-inch Type X gypsum board or equivalent
Structures(s) supporting floor/ceiling assemblies used for separation required by this section	Not less than ½5/8-inch Type X gypsum board or equivalent
Garages located less than 3 feet from a dwelling unit on the same lot	Not less than 5/8-inch Type X gypsum board or equivalent applied to the interior side of exterior walls that are within this area

R302.7 Under stair protection. Enclosed accessible space under stairs shall have walls, under-stair surface and any soffits protected on the enclosed side with 5/8 1/2 inch (15.9 12.7-mm) Type X gypsum board or construction equal to a 1 hour fire-resistance-rating.

Section R313 Automatic Fire Sprinkler Systems of the 2012 International Residential Code is amended as follows:

R313.2 One- and two-family dwelling automatic fire systems. As allowed by State law, An automatic residential fire sprinkler system shall be designed and installed in one- and two-family dwellings in accordance with Section P2904 or NFPA 13D.

Exception: *[Entire exception deleted.]*

R313.2.1 Design and installation *[Entire subsection deleted.]*

R313.3 Applicability of Ordinance No. 08-01-12, Exhibit "A", Section R325. Until State law allows Section R313.2 to apply and pursuant to §1301.551, TEX. OCC. CODE, Frisco restates, reaffirms and ratifies the following regulation contained in Exhibit "A" of Ordinance No. 08-01-12:

SECTION R325 AUTOMATIC FIRE PROTECTION

Section R325.1. Automatic fire protection required: Automatic fire protection systems in accordance with NFPA 13D or NFPA 13R shall be provided in all one and two-family dwellings with a gross floor area 6000 square feet (1830 m²) or greater. For the purposes of this section, gross floor area means conditioned space and attached garage areas. Unenclosed covered areas, such as porches and balconies, are not included. Automatic fire protection systems shall be provided in all buildings containing three (3) or more dwelling units. In the event that an addition or alteration increases the gross floor area from less than 6000 square feet to equal to or greater than 6000 square feet the entire dwelling shall be retro fitted with an automatic fire protection system in accordance with NFPA 13D or NFPA 13R.

Where requirements in this section conflict with requirements found in the International Fire Code, adopted by Frisco, the most stringent requirements shall apply.

Exception: This Section R313.3 shall be automatically repealed and deleted if State law allows Section R313.2 to apply.

Section R315 Carbon Monoxide Alarms of the 2012 International Residential Code is amended as follows:

R315.1 Carbon monoxide alarms. An approved carbon monoxide alarm shall be installed for each 1000 square feet (305 m²) of living area. Carbon Monoxide detectors shall be placed adjacent to access for fuel burning appliances, at least one location per floor level and at garage entrances. Power source shall be the same as required by Section R314.4 for smoke detectors. ~~For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.~~

Section R319 Site Address of the 2012 International Residential Code is amended as follows:

R319.1 Address numbers. All new or existing buildings or structures shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property and from alleyway, fire lanes and other vehicular entrances to the rear of the building. These numbers shall contrast with their background. All letters or numbers shall be permanently attached to the building. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of ½ inch (12.7 mm). Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure.

Section R322 Flood-resistant Construction of the 2012 International Residential Code is amended as follows:

R322.1 General. Buildings and structures, when permitted to be constructed in whole or in part in flood hazard areas (including A or V Zones) as established in Table R301.2(1), shall be designed and constructed in accordance with the provisions contained in this section or by local provisions as applicable. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

Chapter 4. Foundations of the 2012 International Residential Code is amended as follows:

Section 401 General of the 2012 International Residential Code is amended as follows:

R401.3 Drainage. Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection so as to not create a hazard. Lots shall be graded so as to drain surface water away from foundation walls. The grade away from foundation walls shall fall a minimum of 6 inches (152 mm) within the first 10 feet (3048 mm). The slope at any spot on any residential lot shall not exceed 1 vertical unit in 3 horizontal units (i.e. 33%).

Section R403 Footings of the 2012 International Residential Code is amended as follows:

R403.1.8 Foundations on expansive soils. Foundation and floor slabs for buildings located on expansive soils shall be designed as drought tolerant and in accordance with Section 1808.6 of the International Building Code, The American Society of Civil Engineers Texas Section Recommended Practice for the Design of Residential Foundations Version 2 as it currently exists or may be amended, or other accepted industry standards that may be acceptable to the building official. All foundations shall be designed by a registered Professional Engineer in the State of Texas and all drawings and documentation must be signed and sealed. Design Engineers must be registered with Frisco and provide proof of

Professional Liability Insurance with a minimum coverage of one million dollars. Documentation shall include:

1. Design letter referencing soils report number, date of report, and soils engineer name; specific location including lot, block, and subdivision; specific design criteria including soil bearing capacity, plasticity index, and potential vertical rise. The engineer shall also approve a concrete mix design with performance criteria based on soils and seasonal conditions.
2. Signed and sealed drawings clearly indicating strand and reinforcement placement, pier size, depth, location, and reinforcing, beam size and location, and special details. Design calculations must be included. One ledger size copy of plans and calculations will be included in the permanent permit file for each project.
3. Design engineer must perform a pre-pour inspection and provide the building official with signed and sealed document stating that the foundation has been inspected and approved. This inspection must take place prior to requesting a foundation inspection from the building official. The engineer shall be present during placement of concrete to verify concrete mix design and seasonal conditions during placement, and verify tensioning and elongation of cables.
4. Rough grading of lot after form removal to maintain drainage away from foundation during the construction process.
5. Prior to receiving a Certificate of Occupancy, a final survey indicating final grade elevations and verifying positive drainage away from the foundation, and evidence from the homeowner that they have received a copy of foundation maintenance instructions must be submitted to the building official.
6. The engineer must provide to the building official a letter of final acceptance stating that the foundation has been placed in compliance with the design prior to the issuance of a Certificate of Occupancy.

Chapter 7. Wall Covering of the 2012 International Residential Code is amended as follows:

Section R703 Exterior Covering of the 2012 International Residential Code is amended as follows:

R703.5 Wood shakes and shingles. ~~Wood shakes and shingles shall conform to CSSB Grading Rules for Wood Shakes and Shingles. Wood shakes and shingles are prohibited as exterior wall covering.~~

Chapter 9. Roof Assemblies of the 2012 International Residential Code is amended as follows:

Section R902 Roof Classification of the 2012 International Residential Code is amended as follows:

R902.3. Minimum Roof Class. All roof coverings shall be a minimum Class C. All individual replacement shingles or shakes shall be a minimum Class C.

Exception: Non-classified roof coverings shall be permitted on buildings of U occupancies having not more than 120 square feet (37.5 m²) of projected roof area. When exceeding 120 square feet (37.5 m²) of projected roof area, buildings of U occupancies may use non-rated non-combustible coverings.

Section R907 Reroofing of the 2012 International Residential Code is amended as follows:

R907.1 General. Materials and methods of application used for re-covering or replacing an existing roof covering shall comply with the requirements of Chapter 9. All individual replacement shingles or shakes shall comply with Section R902.2.

Chapter 11. [RE] Energy Efficiency of the 2012 International Residential Code is amended as follows:

Section N1101 General of the 2012 International Residential Code is amended as follows:

N1101.7 (R102.1.1) Above code programs. *[Paragraph remains unchanged.]*

N1101.7.1 Recognized energy-efficiency programs and codes. In addition to other applicable regulations of Frisco, as they exist or may be amended, the following shall be accomplished for residential single-family new home construction. The minimum standard for energy efficiency of single-family residential structures shall be the one of the following:

1. Environmental Protection Agency's (EPA) ENERGY STAR® designation as it stands or may be amended;
2. Fifteen (15) percent increase in energy efficiency over most recent SECO approved Texas Building Energy Code for single-family construction provided with high efficacy lighting as defined by Department of Energy (DOE) with a minimum of seventy-five (75) percent of all fixtures meeting this requirement;
3. Dallas Builders Association's GREEN BUILT TEXAS™ 3.0 designation as it stands or may be amended; or

4. Alternative compliance paths may be reviewed by the building official for approval.

N1101.7.2 Permit documentation. Permits submitted under the IECC performance alternative must originate from the recognized third party and be signed by the third party plan reviewer.

1. Permit submittal documentation must include mechanical loads and designs reports originating from an approved software program by Frisco registered and licensed by the State mechanical contractor under the permit or other party approved by the building official. Such programs shall include Air Conditioning Contractors of America (ACCA) approved software. Hand calculations are not acceptable. Other software programs may be accepted at the discretion of the building official. Submittal shall include an attic ventilation plan demonstrating compliance to current adopted International Residential Code (ICC).

2. Recognized third party organizations shall include:

- Residential Energy Services Network (RESNET).
- International Energy Conservation Code (IECC); and
- Building Performance Institute (BPI).

Exception: Additional third party organizations may be allowed at the building official's discretion. All third party inspection agencies must register annually with Development Services and provide documentation of code or organization certification. Inspectors, plan reviewers and technicians of inspection agencies shall hold a current code or organization certification under the compliance method chosen in Section N1101.7.1.

3. Recognized performance based software shall include the latest versions of Department of Energy (DOE) or State of Texas approved software. Alternative software packages may be allowed at the building official's discretion.

N1101.7.3 Visual Observation and Testing. The following inspections will be required in addition to minimum required protocols: Poly Seal (Pre-Batt/Blown In Blanket System). Visual air sealing inspection alternative alone shall not be used to demonstrate compliance. All homes shall be tested for air tightness. Documentation required at the time of inspection shall include:

1. Matching Air-Heating and Refrigeration Institute (AHRI) System Certification (Final);
2. Matching AHRI Furnace Certification;

3. Matching Air Conditioning Contractors of America (ACCA) Manual J (most current published edition)(rough frame); and

4. Matching ACCA Manual D (most current published edition)(rough frame) with layout; and An approved HVAC commissioning report (final).

N1101.7.4 Mandatory prescriptive requirements. A return air path shall be provided for any room that can be closed off by a door (except for baths, kitchens, closets, pantries, mechanical rooms, and laundry rooms). The pressure differential for that room, with doors closed and air handler operating, must not exceed ± 3 Pascal pressure differential with respect to the main body of the home or where the central return is located.

All joints in the air distribution system including ducts, plenums, and equipment shall be sealed with duct mastic. Mastic shall not be applied to the duct jacket as this inhibits inspection of connections.

N1101.7.5 Building Official Acceptance. All registered third party inspection agencies shall be subject to a random review process by Development Services to ensure compliance with these minimum standards. This review may include, but not limited to:

1. Visual observation of site inspection procedures;
2. Accuracy of testing results; and
3. Verification of documentation provided for permitting.

The building official reserves the right to require corrections to:

1. Registered third party inspection agencies energy analysis;
2. Documentation procedures;
3. Inspection procedures; and/or
4. Other elements of energy efficiency verification to ensure submitted minimum standards are met.

N1101.7.6 Indoor Air Quality. In addition to Frisco's other applicable regulations, as they exist or may be amended, the following must be demonstrated:

1. The minimum standard for indoor air quality of single-family residential structures shall be the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE™) Standard 62.2 as it stands or may be amended. Where design strategy calls for the introduction of unconditioned outside air, systems must

incorporate an Energy Recovery Ventilator (ERV) or an integrated motor control/electronically commutated motor (ICM/ECM) fan with actuating damper and sensing technology to control temperature and humidity of introduced outside air. Such systems must be designed to achieve fresh air standards through a single system (zone) when possible. Multisystem fresh air designs are acceptable if published manufacturer's or engineers (stamped) design indicates that a single system (zone) will not meet ASHRAE 62.2 requirements. Method of exhaust only shall not be used to fulfill the requirement for ventilation air without providing for an approved controlled source of filtered relief air.

2. Outdoor air intakes must be screened and located under soffits or gables, at a minimum of 60 inches from all roofing materials that are located below the air intake (except metal roofs where roof penetration is allowed). Intakes are prohibited over porch/balcony areas or in soffits/eaves within ten feet of porch/balcony.

3. All HVAC plenums on the supply & return side must be constructed of sheet metal (no duct board or exposed framing), or equivalent material approved by the building official, with external insulation (minimum R-6, if located in unconditioned space).

4. Heating and cooling equipment shall only be used during construction after manufacturer specified filter is installed. Otherwise, all terminations shall be blocked off by semi-permanent means at rough-in. Used filters must be replaced with a new manufacturer recommended filter prior to the homeowner occupying the structure.

5. Central vacuums, where provided, shall be vented to outdoors.

6. Vinyl wallpaper or other similar permeability rated material is not allowed on the inside of exterior walls or either side of wet walls such as bathrooms, kitchen, or laundry rooms.

N1101.7.7 Water Conservation. In addition to Frisco's landscape ordinance and other applicable regulations, as they exist or may be amended, the following must be accomplished:

1. All new irrigation systems must have a master control valve installed downstream from the back flow device utilizing an irrigation controller with a pump/master valve feature.

2. All spray irrigation heads will be installed with an integrated pressure regulator matching manufacturer specifications for ideal nozzle pressure.

3. Irrigation zones utilizing rotary sprinkler heads will either have pressure regulated in the head or utilize an integrated zone valve with a

pressure regulator adjusted to the manufacturers recommended ideal head pressure for the intended head spacing and radius of throw.

4. Bedding areas and trees must be mulched to a minimum depth of three (3) inches.

5. A temporary drip irrigation bag, drip irrigation or bubbler system zoned separately, must be installed on each installed tree.

6. Each drip zone shall be installed utilizing an operating indicator that will clearly indicate when that drip zone is running. The precipitation rate of drip zones shall not exceed one (1) inch per hour.

7. All toilets installed during new construction or professional remodel must carry the Watersense™ label. Additional standards for water efficiency may be allowed at the building official's discretion.

8. All showerheads installed during new construction or professional remodel must carry the Watersense™ label. Additional standards for water efficiency may be allowed at the building official's discretion.

N1101.7.8 Waste Recycling. In addition to Frisco's waste reduction and recycling regulations, as they exist or may be amended, the following must be accomplished:

1. Construction waste (brick and wood) hauled from the building site by the builder shall be taken to a site or facility legally empowered to accept it for recycling as approved by the County and State in which the facility is located.

2. Provide Environmental Services with documentation that the above criterion has been met.

Section N1101.9 (R202) Defined terms of the 2012 International Residential Code is amended as follows:

GLAZING AREA. Total area of the glazed fenestration measured using the rough opening and including sash, curbing or other framing elements that enclose conditioned space. Glazing area includes the area of glazed fenestration assemblies in walls bounding conditioned basements. For doors where the daylight opening area is less than 50 percent of the door area, the glazing area is the daylight opening area. For all other doors, the glazing area is the rough opening area for the door including the door and the frame.

Section N1102 (R402) Building Thermal Envelope of the 2012 International Residential Code is amended as follows:

N1102.1.1 (R402.1.1) Insulation and fenestration criteria. *[Paragraph remains unchanged.]*

**TABLE N1102.1.1 (R402.1.1)
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT**

CLIMATE ZONE	WOOD FRAME WALL R-VALUE
3	20 or 13+5 <u>13</u>

N1102.1.3 (R402.1.3). U-factor alternative. *[Paragraph remains unchanged.]*

**TABLE N1102.1.3 (R402.1.3)
EQUIVALENT U-FACTORS**

CLIMATE ZONE	WOOD FRAME WALL R-VALUE
3	0.057 <u>0.082</u>

N1102.2.2 (R402.2.2) Ceilings without attic spaces. Where Section R402.1.1 would require insulation levels above R-30 and the design of the roof/ceiling assembly does not allow sufficient space for the required insulation, the minimum required insulation for such roof/ceiling assemblies shall be R-30. This reduction of insulation from the requirements of Section R402.1.1 shall be limited to 500 square feet (46 m²) ~~or 20 percent of the total insulated ceiling area, whichever is less.~~ This reduction shall not apply to the U-factor alternative approach in Section R402.1.3 and the total UA alternative in Section R402.1.4.

N1102.2.13 (R402.2.13) Insulation installed in walls. To insure that insulation remains in place, insulation batts installed in walls shall be totally secured by an enclosure on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, netting or other equivalent material approved by the building official.

N1102.4.1.2 (R402.4.1.2) Testing. The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 5 air changes per hour ~~in Climate Zones 1 and 2, and 3 air changes per hour in Climate Zones 3 through 8.~~ *[Remainder of paragraph unchanged.]*

Section N1103 (R403) Systems of the 2012 International Residential Code is amended as follows:

N1103.2.2 (R403.2.2) Sealing (Mandatory). *[Paragraph remains unchanged.]*

Testing may only be performed by individuals that are certified HERS Raters or Rating Field Inspectors by RESNET or Performance

Verification Technicians certified by Texas HERO, or other certifications as may be approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed; or have any financial interest in the company that installed the duct system.

N1103.2.3 (R403.2.3) Building cavities (Mandatory). Building framing cavities shall not be used as supply ducts and plenums. Building framing wall cavities in the exterior thermal envelope shall not be used as return ducts.

Section N1105 (R405) Simulated Performance Alternative (Performance) of the 2012 International Residential Code is amended as follows:

N1105.6.2 (R405.6.2) Specific approval. *[Beginning of paragraph remains unchanged.]* Acceptable performance software simulation tools may include, but are not limited to, REM Rate™, Energy Gauge and IC3. Other performance software programs accredited by RESNET BESTEST and having the ability to provide a report as outlined in R405.4.2 may also be deemed acceptable performance simulation programs and may be considered by the building official.

Chapter 13. General Mechanical System Requirements of the 2012 International Residential Code is amended as follows:

Section M1305 Appliance Access of the 2012 International Residential Code is amended as follows:

M1305.1.3 Appliances in attics. Attics containing appliances shall be provided with an opening and a clear and unobstructed passageway large enough to allow removal of the largest appliance. The passageway shall not be less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) in length measured along the center line of the passageway from the opening to the appliance. The passageway shall have continuous unobstructed solid flooring in accordance with Chapter 5 not less than 24 inches (610 mm) wide. A level service space at least 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present along all sides of the appliance where access is required. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), and large enough to allow removal of the largest appliance. At a minimum, access to the attic space shall be provided by one of the following:

1. Permanent stairs or ladder fastened to the building;
2. A pull down stair with a 300 lb. rating; or
3. An access door from an upper floor.

Exceptions: *[Exceptions remain unchanged.]*

Chapter 14. Heating and Cooling Equipment and Appliances of the 2012 International Residential Code is amended as follows:

Section M1411 Heating and Cooling Equipment of the 2012 International Residential Code is amended as follows:

M1411.3.1 Auxiliary and secondary drain systems. In addition to the requirements of Section M1411.3, a secondary drain or auxiliary drain pan shall be required for each cooling or evaporator coil where damage to any building components will occur as a result of overflow from the equipment drain pan or stoppage in the condensate drain piping. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than 1/8 unit vertical in 12 units horizontal (1-percent slope). Methods 3 and 4 below may not be used for cooling or evaporator coils located in attics of residential occupancies. Drain piping shall be a minimum of 3/4-inch (19 mm) nominal pipe size. One of the following methods shall be used:

1. An auxiliary drain pan with a separate drain shall be installed under the coils on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. However, the conspicuous point shall not create a hazard such as dripping over a walking surface or other areas so as to create a nuisance. The pan shall have a minimum depth of 1.5 inches (38 mm), shall not be less than 3 inches (76 mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Galvanized sheet metal pans shall have a minimum thickness of not less than 0.0236-inch (0.6010mm) (No. 24 gage). Nonmetallic pans shall have a minimum thickness of not less than 0.0625 inch (1.6 mm).
2. A separate overflow drain line shall be connected to the drain pan installed with the equipment. The overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. However, the conspicuous point shall not create a hazard such as dripping over a walking surface or other areas so as to create a nuisance. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection.

Chapter 15. Exhaust Systems of the 2012 International Residential Code is amended as follows:

Section M1502 Clothes Dryer Exhaust of the 2012 International Residential Code is amended as follows:

M1502.4.5 Length identification. Where the exhaust duct is concealed within the building construction, the equivalent length of the exhaust duct shall be identified on a permanent label or tag. The label or tag shall be located ~~within 6 feet (1829 mm) of~~ at the exhaust duct connection.

Section M1503 Range Hoods of the 2012 International Residential Code is amended as follows:

M1503.4 Makeup air required. Exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute ($0.19 \text{ m}^3/\text{s}$) shall be provided with makeup air at a rate approximately equal to the difference between the exhaust air rate and 400 cubic feet per minute ($0.19 \text{ m}^3/\text{s}$). Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system.

Exception: Where all appliances within the building envelope are of sealed combustion, direct power-vented, or electric, the exhaust hood system shall be permitted to exhaust up to 600 cubic feet per minute ($0.28 \text{ m}^3/\text{s}$) without providing makeup air. Exhaust hood systems capable of exhausting in excess of 600 cubic feet per minute ($0.28 \text{ m}^3/\text{s}$) shall be provided with a makeup air at a rate approximately equal to the difference between the exhaust air rate and 600 cubic feet per minute.

Section M1506 Exhaust Ducts and Exhaust Openings of the 2012 International Residential Code is amended as follows:

M1506.1 Ducts. Where exhaust duct construction is not specified in this chapter, construction shall comply with Chapter 16. All exhaust ducts shall be metallic.

Chapter 20 Boilers and Water Heaters of the 2012 International Code is amended as follows:

Section M2005 Water Heaters of the 2012 International Residential Code is amended as follows:

M2005.2 Prohibited locations. Fuel-fired water heaters shall not be installed in room used as a storage closet. Water heaters located in a bedroom or bathroom shall be installed in a sealed enclosure so that combustion air will not be taken from the living space. Installation of direct-vent water heaters within an enclosure is not required. Water heaters other than tankless type, shall be prohibited in attic space or a space located above living space.

Exception: Existing water heater replacement when located in attic space or a space located above living space.

Chapter 24 Fuel Gas of the 2012 International Code is amended as follows:

Section G2411 Electrical Bonding of the 2012 International Residential Code is amended as follows:

G2411.1 (310.1) Pipe and tubing other than CSST. Each above-ground portion of a gas piping system other than corrugated stainless steel tubing (CSST) ~~that is likely to become energized~~ shall be electrically continuous and bonded to the service equipment enclosure, the grounded conductor at the service, the grounding electrode conductor where sufficient size, or to one or more of the grounding

electrodes used. The bonding jumper(s) shall be sized in accordance with Table E3908.12. The points of attachment of the bonding jumper(s) shall be accessible. Steel gas piping systems shall be bonded at the point of service entry into the dwelling, an effective ground-fault current path. Gas piping, other than CSST, shall be considered to be bonded where it is connected to appliances that are connected to the equipment grounding conductor of the circuit supplying that appliance. In addition, bonding is required for all metal air ducts, metal chimneys, appliance vents and other metal structures that are likely to become energized.

G2411.1.1 (310.1.1) CSST. Corrugated stainless steel tubing (CSST) gas piping systems shall be bonded to the electrical service grounding electrode system. The bonding jumper shall connect to a metallic pipe or fitting between the point of delivery and the first downstream CSST fitting and at any metallic manifolds. The bonding jumper shall be not smaller than 6AWG copper wire or equivalent. Gas piping systems that contain one or more segments of CSST shall be bonded in accordance with this section.

Section G2412 General of the 2012 International Residential Code is amended as follows:

G2412.5 (401.5) Identification. *[Paragraph remains unchanged.]*

Both ends of each section of medium pressure corrugated stainless steel tubing (CSST) shall identify its operating gas pressure with an approved tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag:

“Warning: ½ to 5psi gas pressure. Do Not Remove!”

Section G2415 Piping System Installation of the 2012 International Residential Code is amended as follows:

G2415.12 (404.12) Minimum burial depth. Underground piping systems shall be installed a minimum depth of 12-18 inches (305-458 mm) below grade, ~~except as provided for in Section G2415.9.1.~~

G2415.17.2 (404.17.2) Connections. Connections outdoors and underground between metallic and plastic piping shall be made only with transition fittings conforming to ASTM D 2513 Category I or ASTM F 1973. Compression-type mechanical joints are not permitted underground.

Section G2417 Inspection, Testing and Purging of the 2012 International Residential Code is amended as follows:

G2417.1 (406.1) General. Prior to acceptance and initial operation, all piping installations shall be inspected and pressure tested to determine that the materials, design, fabrication, and installation practices comply with the requirements of this code. The permit holder shall make the applicable tests prescribed in Sections

2417.1 through 2417.7.4 to determine compliance with the provisions of this code. The permit holder shall give reasonable advance notice to the code official when the piping system is ready for testing. The equipment, material, power, and labor necessary for the inspections and test shall be furnished by the permit holder and the permit holder shall be responsible for determining that the work will withstand the test pressure prescribed in the following tests.

G2417.4 (406.4) Test pressure measurement. Test pressure shall be measured with a manometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the pressure test period. The source of pressure shall be isolated before the pressure tests are made. For a test requiring a 3 psig, mechanical gauges shall utilize a dial with a minimum diameter of three and one half inches (3 1/2"), a set hand, 1/10 pound incrimination and pressure range not to exceed 6 psi. For test requiring 10 psig. Mechanical gauges shall utilize a dial with minimum diameter of three and one-half inches (3 1/2"), a set hand, a minimum of 2/10 pound incrimination and a pressure range not to exceed 20 psi. Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure.

G2417.4.1 (406.4.1) Test pressure. The test pressure to be used shall be no less than one and one half times the proposed maximum working pressure, but not less than 3 psig (20 kPa gauge), irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe, not be less than 3 psig (20 kPa gauge), or at the discretion of the Code Official, the piping and valves may be tested at a pressure of at least 6 inches (152 mm) of mercury, measured with a manometer or slope gauge. For welded piping and for piping carrying gas at pressures in excess of 14 inches water column pressure (3.48 kPa) (1/2 psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 ps), the test pressure shall be not less than 10 pounds per square inch (69.6 kPa). For piping carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure shall not be less than one and one-half time the proposed maximum working pressure.

G2417.4.2 (406.4.2) Test duration. Test duration shall be not less than 10 minutes, held for a length of time satisfactory to the code official, but in no case less than 15 minutes. For welded piping, and for piping carting gas at a pressures in excess of 14 inches water column pressure, the test duration shall be for a length of time satisfactory to the Code Official, but in no case less than 30 minutes.

Section G2421 Flow Controls of the 2012 International Residential Code is amended as follows:

G2421.1 (410.1) Pressure regulators. A line pressure regulator shall be installed where the appliance is designed to operate at a lower pressure than the supply

pressure. Line gas pressure regulators shall be listed as complying with ANSI Z21.80. Access shall be provided to pressure regulators. Pressure regulators shall be protected from physical damage. Regulators installed on the exterior of the building shall be approved for outdoor installation. Access to regulators shall comply with the requirements for access to appliances as specified in Section M1305.

Exception: A passageway or level service space is not required when the regulator is capable of being serviced and removed through a required attic opening.

Section G2427 Venting of Appliances of the 2012 International Residential Code is amended as follows:

G2427.6.9 Support of gas vents. Gas vents shall be supported and spaced in accordance with the manufacturer's installation instructions. Supports shall be installed at every offset and at the vent pipe where it extends through the roof flashing, roof jack, or roof thimble. Adjustable fittings shall not be used as lateral support for roof penetration.

G2435.5.6 Length identification. Where the exhaust duct is concealed within the building construction, the equivalent length of the exhaust duct shall be identified on a permanent label or tag. The label or tag shall be located ~~within 6 feet (1829 mm)~~ at the exhaust duct connection.

Section G2445 Unvented Room Heaters of the 2012 International Residential Code is amended as follows:

G2445.2 (621.2) Prohibited use. One or more unvented room heaters shall not be used as the sole source of comfort heating in a dwelling unit. Unvented room heaters shall not be installed in a residential single-family residential construction regulated by Section N1107.7.1

Exception: Existing approved unvented heaters may continue to be used in dwelling units, in accordance with the code provisions in effect when installed, when approved by the building official unless an unsafe condition is determined to exist as described in International Fuel Gas Code Section 108.7.

Chapter 25. Plumbing Administration of the 2012 International Residential Code is amended as follows:

Section P2503 Inspection and Test of the 2012 International Residential Code is amended as follows:

P2503.6 Shower liner testing. Where shower floors and receptors are made water-tight by the application of materials required by Section P2709.2, the completed liner installation shall be tested. The pipe from the shower drain shall be plugged water tight for the test. The floor and receptor area shall be filled with

potable water to the level of the rough ~~a depth of not less than 2 inches (51mm) measured at the threshold~~. Where a threshold of at least 2 inches (51mm) high does not exist, a temporary threshold shall be constructed to retain the test water in the lined floor or receptor area to a the level of the ~~not less than 2 inches (51mm) measured at the threshold~~. The water shall be retained for a test period of not less than 15 minutes, and there shall be no evidence of leakage.

P2503.8.2 Testing. Reduced pressure principle, double check, double check detector and pressure vacuum breaker backflow preventer assemblies shall be tested at the time of installation, immediately after repairs or relocation and at least annually regular intervals as required by applicable state or local provisions.

Chapter 26. General Plumbing Requirements of the 2012 International Residential Code is amended as follows:

Section P2603 Structural and Piping Protection of the 2012 International Residential Code is amended as follows:

P2603.5.1 Sewer depth. ~~Building sewers that connect to private sewage disposal systems shall be a minimum of [12] inches (304mm) below finished grade at the point of septic tank connection.~~ Building sewers shall be a minimum of 12 inches (304 mm) below grade.

Chapter 28. Water Heaters of the 2012 International Residential Code is amended as follows:

Section P2803 Relief Valves of the 2012 International Residential Code is amended as follows:

P2803.6.1 Requirements for discharge pipe. The discharge piping serving a pressure-relief valve, temperature relief valve or combination valve shall:

5. ~~Discharge to the floor, to the pan serving the water heater or storage tank, to an indirect waste receptor or to the outdoors. When discharging outside the building, the point of discharge shall be with the end of the pipe six (6) inches (152 mm) above the ground and pointing downward.~~

Chapter 29. Water Supply and Distribution of the 2012 International Residential Code is amended as follows:

Section P2902 Protection of Potable Water Supply of the 2012 International Residential Code is amended as follows:

P2902.5.3 Lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by ~~an atmospheric vacuum breaker, a pressure vacuum breaker assembly~~ a double check valve assembly or a reduced pressure principle backflow preventer

assembly. ~~A valve shall not be installed downstream from an atmospheric vacuum breaker.~~ Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer installed above grade.

Section P2903 Water-supply System of the 2012 International Residential Code is amended as follows:

P2903.3.1 Maximum pressure. The static water pressure shall be not greater than 80 psi (551 kPa). ~~When main pressure exceeds 80 psi (551 kPa), an approved pressure-reducing valve conforming to ASSE 1003 or CSA B356 shall be installed on the domestic water branch main or riser at the connection to the water service pipe.~~ An approved water pressure reducing valve conforming to ASSE 1003 or CSA B356 with strainer shall be installed on all water distribution systems to protect the system from excessive pressure in the public water mains. Pressure shall be adjusted to a minimum of 40 psi and a maximum of 80 psi. When the pressure reducing valve is installed indoors, it shall be located in the garage, and installed in an insulated wall separating the garage and living space of the dwelling. Unions shall be provided to allow for service and replacement when located indoors. When installed outdoors it shall be installed in an accessible location in a minimum 12"W x 18"L x 12"D valve box and be provided with minimum 12" of porous rock below it to aid in drainage. A permanent marker identifying the location of the PRV shall be placed on the exterior veneer of the structure.

P2903.8.3 Orientation and location. Manifolds shall be permitted to be installed in a horizontal or vertical position. Manifolds shall be installed between parallel rows of studs, or in a chase that allows piping to connect freely to manifold without creating stresses on the connections.

P2903.8.5 Valving. Fixture valves, ~~when installed shall be located either at the fixture or and at the manifold.~~ ~~If Valves are installed at the manifold, they shall be labeled indicating the fixture served.~~

Section P2905 Materials, joints and connections of the 2012 International Residential Code is amended as follows:

P2905.5 Water-distribution pipe. Water-distribution piping within dwelling units shall conform to NSF 61 and shall conform to one of the standards listed in Table P2905.5. All hot water-distribution pipe and tubing shall have a minimum pressure rating of 100 psi at 180° F (689 kPa at 82° C) and shall be insulated with a minimum of 0.38 inch (9.5 mm) of insulating material.

Chapter 30. Sanitary Drainage of the 2012 International Residential Code is amended as follows:

Section P3005 Drainage system of the 2012 International Residential Code is amended as follows:

P3005.4 Drain pipe sizing. Drain pipes shall be sized according to drainage fixture unit (d.f.u.) loads. The size of the drainage piping shall not be reduced in size in the direction of flow. No building sewer, including cleanouts, shall be less than 4 inches (102 mm) or smaller than the building drain. The following general procedure is permitted to be used:

Chapter 31. Vents of the 2012 International Residential Code is amended as follows:

Section P3111 Combination Waste and Vent System of the 2012 International Residential Code is deleted in its entirety.

Section P3112 Island fixture Venting of the 2012 International Residential Code is amended as follows:

P3112.3 Vent installation below the fixture flood level rim. ~~The vent located below the flood level rim of the fixture being vented shall be installed as required for drainage piping in accordance with Chapter 30, except for sizing. The vent shall be sized in accordance with Section P3113.1. Traps for island sinks and similar equipment shall be roughed in above the floor and may be vented by extending the vent as high as possible, but not less than the drain board height and then returning it downward and connecting it to the horizontal sink drain immediately downstream from the vertical fixture drain. The return vent shall be connected to the horizontal drain through a wye-branch fitting and shall, in addition, be provided with a foot vent taken off the vertical fixture vent by means of a wye-branch immediately below the floor and extending to the nearest exterior wall location and then through the roof to the open air or may not be connected to other vents at a point not less than six (6) inches (152 mm) above the flood level rim of the fixtures served. Drainage fittings shall be used on all parts of the vent below the floor level and a minimum slope of one-quarter (1/4) inch per foot (20.9mm/m) back to the drain shall be maintained. The return bend used under the drain board shall be a one (1) piece fitting or an assembly of a forty-five (45) degree (0.79 radius), a ninety (90) degree (1.6 radius) and forty-five (45) degree (0.79 radius) elbow in the order named. Pipe sizing shall be as elsewhere required in this code. The island sink drain, upstream of the return vent, shall serve no other fixtures. An accessible cleanout shall be installed in the vertical portion of the foot vent. The lowest point of the island fixture vent shall connect full size to the drainage system. The connection shall be to a vertical drain pipe or to the top half of a horizontal drain pipe. Cleanouts shall be provided in the island fixture vent to permit rodding of all vent piping located below the flood level rim of the fixtures. Rodding in both directions shall be permitted through a cleanout.~~

Section P3114 Air Admittance Valves of the 2012 International Residential Code is amended as follows:

P3114.3 Where permitted. Individual vents, branch vents, circuit vents and stack vents shall may be permitted to terminate with a connection to an air admittance valve. Individual and branch type air admittance valves shall vent only fixtures that are on the same floor level and connect to a horizontal branch drain. Air

admittance valves shall only be installed with the prior approval of the building official.

Chapter 34. General Requirements of the 2012 International Residential Code is amended as follows:

Section E3406 Electrical conductors and Connections of the 2012 International Residential Code is amended as follows:

E3406.2 Conductor material. Conductors used to conduct current shall be of copper ~~except as otherwise provided in Chapters 34 through 43.~~ Where the conductor material is not specified, the material and the sizes given in these chapters shall apply to copper conductors. Where other materials are used, the conductor sizes shall be changed accordingly.

E3406.3 Minimum size of conductors. The minimum size of conductors for feeders and branch circuits shall be 12 ~~14~~ AWG copper ~~and 12 AWG aluminum.~~ The minimum size of service conductors shall be as specified in Chapter 36. The minimum size of class 2 remote control, signaling and power-limited circuits conductors shall be as specified in Chapter 43.

Section E3609 Bonding of the 2012 International Residential Code is amended as follows:

E3609.7 Bonding other metal piping. Where installed in or attached to a building or structure, metal piping systems, including gas piping, capable of becoming energized shall be bonded to the service equipment enclosure, the grounded conductor at the service, the grounding electrode conductor where of sufficient size, or to the one or more grounding electrodes used. The bonding conductor(s) or jumper(s) shall be sized in accordance with Table E3908.12 using the rating of the circuit capable of energizing the piping. The equipment grounding conductor for the circuit that is capable of energizing the piping shall be permitted to serve as the bonding means. The points of attachment of the bonding jumper(s) shall be accessible. If a steel manifold is used, a bonding clamp shall be attached to the steel manifold. The corrugated stainless steel tube portion of a CSST gas piping system shall not be used as the bonding attachment point. In addition, bonding is required for all metal air ducts, metal chimneys, appliance vents and other metal structures that are likely to become energized.

Chapter 37. Branch Circuit and Feeder Requirements of the 2012 International Residential Code is amended as follows:

Section E3702 Branch Circuit Ratings of the 2012 International Residential Code is amended as follows:

E3702.5 Branch circuits serving multiple loads or outlets. General-purpose branch circuits shall supply lighting outlets, appliances, equipment or receptacle outlets, and combinations of such. Multi-outlet branch circuits serving lighting or receptacles shall be limited to a maximum branch-circuit rating of 20 amperes.

The maximum number of receptacle outlets connected to general purpose branch circuits shall be ten (10) for 15-amp circuits, and thirteen (13) for 20 amp circuits.

Appendix G. Swimming Pools, Spas and Hot Tubs of the 2012 International Residential Code is amended as follows:

Section AG103 Swimming Pools of the 2012 International Residential Code is amended as follows:

AG103.4 Hazardous obstructions. Any obstructions that protrude horizontally over the water surface more than 2 inches shall be a minimum of 6 feet 8 inches vertically from the pool floor and a minimum of 20 inches vertically from the water's surface.

Section AG104 Spas and Hot Tubs of the 2012 International Residential Code is amended as follows

AG104.3 Hazardous obstructions. Any obstructions that protrude horizontally over the water surface more than 2 inches shall be a minimum of 6 feet 8 inches vertically from the spa and hot tub floor and a minimum of 20 inches vertically from the water's surface.

Section AG105 Barrier Requirements of the 2012 International Residential Code is amended as follows:

AG105.4 Prohibited Locations. Barriers shall be located to prohibit permanent structures, equipment or similar structures from being used to climb them. There shall be a minimum of 36 inches from the barrier and permanent structures, equipment or similar structures that would aid in climbing over the barrier.

Section AG106 Entrapment protection for Swimming Pool and Spa suction outlets of the 2012 International Residential Code is amended as follows:

AG106.1 General. *[Paragraph remains unchanged.]*

Exception. The use of single blockable or unblockable main drains shall not be permitted.

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END OF EXHIBIT "A"